Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

peasant with a reasonable amount of land, the death-rate drops down to the ordinary European level.

May not one ask himself what the conclusions would be if a similar investigation were made into the condition of the American negro? May not one express the wish that some such investigation be undertaken by some one fit for the work and free from all prejudices against the negro? The scientific results will undoubtedly repay any amount of labor or expense.

I. M. Rubinow.

Department of Agriculture,
Washington, D.C.

COMMENT ON THE METHOD OF MEASURING CONCENTRATION OF WEALTH.

The method of measuring concentration of wealth has recently been discussed in this journal by Mr. M. O. Lorenz in an article in the June number and by Mr. G. K. Holmes in a reply to criticism in the September number, 1905. In this connection the following remarks have occurred to the writer.

In considering this question, the fundamental point to be kept in mind is that concentration is a fact of relation. Hence *the quantities to be measured are relative.*

The use for comparative purposes of income classes bounded at fixed and absolute amounts is, therefore, misleading. In comparing two points of time fifty years apart, the "middle" class, as thus defined by absolute size of income, may, at the second date, be relatively lower in the scale than at the earlier date. It may then appear to have gained upon the other classes, particularly upon a next lower class that was large at the first date, when there was, in fact, no change in *relative* incomes or even a change in the direction of concentration.

This point may best be illustrated graphically. If we assume that the great majority of incomes treated are incomes of families or of heads of families, then the base of the "income pyramid" is not at zero, but at the point where the income is sufficient barely to maintain a family. The "pyramid," as regards income from labor, is superposed upon an approximately rectangular block, as in Fig. 1. The pyramid of all incomes is composite, made up of incomes from property as well as from labor. The pyramid of income from property is greatly elongated, as in Fig. 2. That of income from labor is much broader at the base, and does not rise so high. The two pyramids combined form a figure like Fig. 3. Rounding off the corners, for the transitions have not in fact the abruptness which convenience in diagramming assumes, we obtain an actual shape for the "pyramid of income" like Fig. 4.

It is easy to see how much depends on where the lines dividing classes are drawn in a figure of such a shape. If these lines are drawn so that at the earlier date the space between them begins somewhat below the re-entrant bend and extends considerably above it, and then, at the second date, circumstances—*e.g.*, the value of money—have so

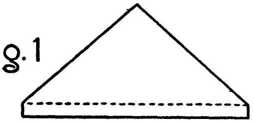

Fig. 1

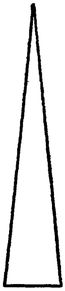

Fig. 2

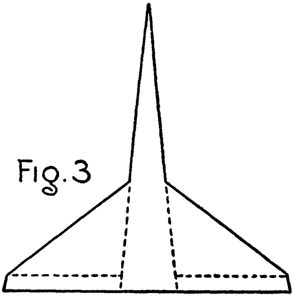

Fig. 3

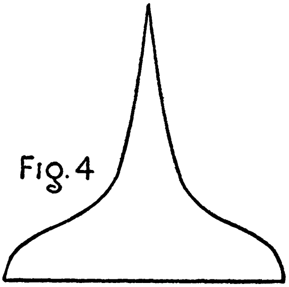

Fig. 4

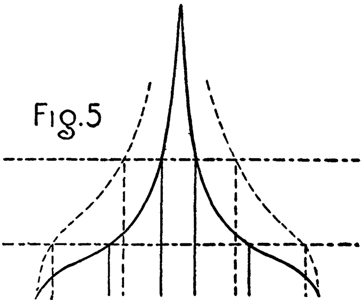

Fig. 5

changed as to throw the re-entrant bend up and just outside the middle-class band and the salient bend more into it, then the middle class will appear to have gained greatly on the lowest, probably enough to more than equal the gain, which will also be great, of the upper class. In Fig. 5 these relations are represented. The proportion of the base of the figure subtended by the parts of the periphery lying between the lines defining the "middle" class indicates the relative number of incomes within that class. In the figure, on doubling all incomes, though concentration has not changed, the "middle" class is to be credited with one-half instead of two-fifths of the incomes.

The numerical tables quoted in Mr. Lorenz's article—those of Goschen, Wolf, and Wagner—are all objectionable from this point of view.

The error of these methods is the greater, since they deal, not with concentration of wealth, but with concentration of income. The increase in the number of moderate but comfortable incomes in the last generation or two is, in all probability, due to the rapid growth of the high-salaried class. If income from wealth is to be averaged or compared with this kind of income, it should first be considerably weighted.

Under such circumstances, to calculate the per cent. of increase in numbers that accrues to each class, as Goschen does, is not convincing, for the significance of the class is changing. Wolf's method, however, makes the most remarkable use of the growth of the salaried class. He credits to the second class not only those who have risen to it from the first or lowest class, but those who have risen out of it to the next higher class. Wagner's comparison of per cents. of number and of income at different dates is least open to objection, but it shows increase of incomes from labor so clearly as to distract the attention from the notable increase of incomes from property, which is also evident.

It is an aggravation of the offence against the essentially relative nature of the problem of concentration to use a scheme in which one of the classes—namely, the uppermost—is without boundary on one of its sides, and thus to forego the attempt to express changes especially affecting that class. This is also a defect of the above three methods.

With the method of irregular absolute-income classes much depends on the value of money and its change between the two dates compared. The value of money has in fact fallen since the opening of the California mines. Hence the "middle" class is likely to be credited with an absolute increase which is nominal only, and not real.

If the classes in such a comparison are made of small and uniform range, which implies a large number of classes, some of the foregoing objections are avoided. The very great growth of the fortunes of the few richest would, for example, bring them into other and new classes. The boundaries of the so-called "middle" class could not then be easily adjusted to make the figures express a desired result. Changes in the value of money would simply spread the cases over a more extended scale. The less the range of a class, the more homogeneous it is. The unlimited upper class of the tables is especially bad from this point of view. Of course, the classes should not in general be of so slight range as not to give statistics; namely, numbers large enough to average with small probable error.

It is natural to infer that the total income or the total wealth, as the case may be, of a class, taking account of its rank, is proportioned to its numbers. This is a statistically legitimate inference for a numerous homogeneous class. It is not true or legitimate, however, for the indefinite uppermost class of the ordinary table. It is also not true of the lowest class, if concentration of wealth is actually what is investigated, and if the propertyless class is included in the lowest class. In using incomes, however, those with none will probably not be included in the classification at all.

The chief reason why this method of classes with equal and small range has these advantages is because it more adequately represents the continuity of the phenomena of distribution. In other words, it is similar to a curve in the character of its mental impression. One is inclined to suspect, therefore, that some graphic would be better than any numerical method.

Continuity, as well as relativity, is an important requirement for any measure or expression of a series of numerous cases of quantitative change or difference. To meet this requirement, either such numerical classes as those just mentioned, or else a curve, should be used. Mr. Lorenz rightly prefers a curve, though he does not see the full possibilities of some numerical procedure.

A satisfactory method must be adequately analytic. It is not enough to know, for instance, how much wealth, or, rather, what proportion of it, the least wealthy half of the population possesses, or what is the number of the most wealthy who possess half the wealth of the country. This is an important objection to such a method as that of Mr. Holmes, that is, it does not go far enough. Adams and Sumner's method, according to Mr. Lorenz "the best numerical method," is likewise open to this objection, though it has the advantage of being necessarily relative.

The objection to any classification of incomes without distinction of kind, even when the purpose is to measure distribution of welfare, and not of wealth, is that it is inadequately analytic. Income from property and income from wealth cannot justly be compared without weighting. The difference is recognized as of practical importance for purposes of taxation. Income in general and wealth are not to be treated as correlates. Tendencies in the development of the two kinds of income in the last century have also been quite different. Neither Mr. Lorenz nor the writers whom he criticises seem to be fully aware of the great difference between measuring concentration of wealth and concentration of income. Income statistics in gross are of doubtful value for the study of concentration of *wealth.*

Mr. Holmes's method is good as far as it goes. Where brevity is more important than completeness, it could hardly be improved upon. But his own misinterpretation conceals the merits of the method. The result should be taken, not as an absolute amount, but as a relative quantity. The *ratio* of the difference between the two medians to the absolute amount, or to the average, of wealth, remains the same when all the absolute amounts have been multiplied by the same number. Mr. Holmes, in his reply to Mr. Lorenz's criticism, fails to see the way out, and continues to interpret his criterion absolutely, trying to give to concentration an unnatural and untrue meaning. Inequality of distribution is by its very nature a question of the relations between distributees.

The satisfactory use of any average, but perhaps especially of the median, supposes regular and symmetrical distribution of the quantities dealt with. The method is therefore not applicable without qualification, to statistics of income as a whole, which mingle two classes of facts with different types of distribution. Mr. Holmes, however, actually deals with concentration of wealth, not of income.

The class "outside the width of distribution" is dealt with separately by Mr. Holmes. The graphic method of Mr. Lorenz provides for those having nothing as well as for all other classes.

Mr. Lorenz's method is a great improvement over the others he enumerates. It meets all the requirements of analysis, continuity, and relativity. It is curious to observe that at page 216 Mr. Lorenz, after mentioning the use of absolute quantities in the same way that he uses relative quantities, says that "one naturally" next tries logarithmic quantities!

Though not affecting his method, it is a fundamental defect of

Mr. Lorenz's discussion and of most discussions of the concentration of wealth, that they do not deal with what they set out to, that is, the concentration of wealth. Of course, the answer to this criticism is that the statistician and economist must use what figures are available, and these are in general income statistics. But the investigator certainly should not give his results a character which is not theirs. He should answer the question with which he sets out to the best of his ability, or else change the statement of the question to conform to what answer he can and does get. And, if he seeks to measure the distribution of possibilities of welfare by way of income, he should at least show some consciousness of the fact that his incomes need weighting before comparison.

G. P. WATKINS.

CORNELL UNIVERSITY.

CHILDREN OF DECEDENTS IN MICHIGAN.

In the absence of satisfactory birth statistics in this country and the great interest in recent years in the problem of "race suicide," any data derived from registration returns and having a direct bearing upon this subject may be esteemed of interest.

An entirely new class of facts, at least for this country, is given in the accompanying table, which is based upon the 32,453 deaths registered in Michigan for the year 1900.

The form of certificate of death used in Michigan, which is otherwise the "standard" blank recommended by the United States Census Bureau, is unique in containing, in addition to the usual statement of "single, married, widowed, or divorced," the following question:—

AGE AT MARRIAGE, NUMBER OF CHILDREN }
If married, age at (first) marriage . . . . years
Parent of . . . children, of whom . . . are living

This question is not always answered, and may not be always answered correctly in all cases. It is probable that the trustworthiness of the replies is fairly close to that of other items, and the number of returns containing answers to this question is probably amply sufficient to establish the general relations of fertility of marriage for the larger groups of decedents.

Excluding males under eighteen years of age and females under sixteen years of age, the legal ages for marriage in Michigan, in cases where the question was not answered, a very few "unknown ages," and also all colored decedents, also few in number, we find that the